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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,622	04/15/2004	Sean Allen Johnson	SVL920040562US2	7882
55070 7590 04/17/2009 INTERNATIONAL BUSINESS MACHINES CORP. (JMS) IP LAW 555 BAILEY AVENUE, J46/G4 SAN JOSE, CA 95141				
EXAMINER JOHNSON, JOHNESE T				
ART UNIT 2166		PAPER NUMBER		
NOTIFICATION DATE 04/17/2009		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/825,622

Applicant(s)

JOHNSON ET AL.

Examiner

Johnese Johnson

Art Unit

2166

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 24-27, 29-32, 39-45, 48, 50 and 52-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 24-27, 29-32, 39-45, 48, 50 and 52-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsman's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2-26-2009
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. In response to the Amendment filed on December 19, 2008, claims 1-13, 24-27, 29-32, 39-45, 48, 50, 52-58 are pending in this application.
2. The rejections under 35 USC 112 are withdrawn in light of applicants detailed explanations.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claims 1-9, 11, 24-27, 29-31, and 50 rejected under 35 U.S.C. 103(a) as being unpatentable over Flores et al. (US Pat. No. 5,734,837) in view of Hobbs (US Pat. No. 6,523,022).

As to claims 1, 24, 48, and 50, Flores discloses:

- a processing unit (see col. 7, line 50); and
- a memory (see col. 7, line 50) comprising:

a virtual repository comprising at least one virtual folder a plurality of nodes, said at least one virtual folder virtually organizing a first work item of a first queue of a first workflow system of the plurality of disparate workflow systems, the first queue of the first workflow system, a second work item of a second workflow system of the plurality of disparate workflow systems, a second queue of the second workflow system, (see col. 4, lines 24-35).

However, Flores does not explicitly disclose:

a first content of a first content repository of the plurality of disparate content repositories, a second content of a second content repository of the plurality of disparate content repositories, a first folder of the first content repository, and a second folder of the second content repository, via a plurality of links comprising a first link, a second link, a third link, a fourth link, a fifth link, a sixth link, a seventh link and an eighth link;

wherein the first workflow system, the second workflow system, the first content repository_ and the second content repository are distributed and disparate;

the [[a]] first being to [[a]] the first work item [[a]] the second link of nodes being to [[a]] the second work item, [[a]] the third link [[a]] the first queue [[a]] the fourth link [[a]] the second [[a]] the fifth link being to [[a]] the first content [[a]] the sixth link being to [[a]] the second content [[a]] the seventh link being to [[a]] the first folder and [[an]] the eighth link plurality of nodes being to [[a]] the second folder and
an application programming interface (API), executable by said processing unit, to interface with a software application to provide access to the virtual repository, wherein

said at least one virtual folder is accessed via said API;
wherein said first work item of said first workflow system is accessed via said first link and said API node, said second work item of said second workflow system is accessed via said second link and said API node, said first queue of said first workflow system is accessed via said third link and said API node, said second queue of said second workflow system is accessed via said fourth link and said API, said first content of said first content repository is accessed via said fifth link and said API, said second content of said second content repository is accessed via said sixth link and said API node, said first folder of said first content repository is accessed via said seventh link and said API node, and said second folder of said second content repository is accessed via said eighth link and said API node

Hobbs discloses:

a first content of a first content repository of the plurality of disparate content repositories, a second content of a second content repository of the plurality of disparate content repositories, a first folder of the first content repository, and a second folder of the second content repository, via a plurality of links comprising a first link, a second link, a third link, a fourth link, a fifth link, a sixth link, a seventh link and an eighth link;

wherein the first workflow system, the second workflow system, the first content repository_ and the second content repository are distributed and disparate;
the [[a]] first being to [[a]] the first work item [[a]] the second link of nodes being to [[a]] the second work item, [[a]] the third link [[a]] the first queue [[a]] the fourth link [[a]] the

second [[a]] the fifth link being to [[a]] the first content [[a]] the sixth link being to [[a]] the second content [[a]] the seventh link being to [[a]] the first folder and [[an]] the eighth link plurality of nodes being to [[a]] the second folder and an application programming interface (API), executable by said processing unit, to interface with a software application to provide access to the virtual repository, wherein said at least one virtual folder is accessed via said API; wherein said first work item of said first workflow system is accessed via said first link and said API node, said second work item of said second workflow system is accessed via said second link and said API node, said first queue of said first workflow system is accessed via said third link and said API node, said second queue of said second workflow system is accessed via said fourth link and said API, said first content of said first content repository is accessed via said fifth link and said API, said second content of said second content repository is accessed via said sixth link and said API node, said first folder of said first content repository is accessed via said seventh link and said API node, and said second folder of said second content repository is accessed via said eighth link and said API node (see col. 1, lines 20-42; col. 4, lines 19-20; col. 21. lines 41-50; col. 8, lines 18-34) and (see col. 7, line 1 and col. 28, lines 13-26).

It would have been obvious to have modified the teachings of Flores by the teachings of Hobbs to provide a system, which, rather than seeking to identify records on a database whose characteristics exactly match what the user types into a query model, embody one or more kinds of expert judgment data for the purpose of selectively

retrieving on demand the best fitting or most appropriate records in response to user data entry. Accordingly, it is desirable to provide a query architecture for an information retrieval method and apparatus that utilizes both pull and push technologies wherein knowledge workers can select their database resources based on the issue they must solve and current awareness or historical data can be pushed to them based upon embedded expert judgment based on the same issue once they have selected the database resources (see Hobbs, col. 7 lines 30-43)

As to claim 2, Hobbs discloses:

wherein creation of the virtual repository does not replicate any of the content of the first and second content repositories, folders of the first and second content repositories, work items of the first and second workflow systems, and queues of the first and second workflow systems; and wherein the creation of the virtual repository does not impact any of the content of the first and second content repositories, folders of the first and second content repositories, work items of the first and second workflow systems, and queues of the first and second workflow systems (see Hobbs col. 4, lines 19-22; wherein the repositories are completely different).

As to claim 3, Hobbs discloses:

wherein creation of the virtual repository does not impact any of an existing organization of any of the content of the first and second content repositories, folders of the first and

second content repositories, work items of the first and second workflow systems, and queues of the first and second workflow systems,

wherein creation of the virtual repository does not impact any functions of any of the content of the first and second content repositories, folders of the first and second content repositories, work items of the first and second workflow systems, and queues of the first and second workflow systems,

wherein creation of the virtual repository does not impact any indexing of any of the content of the first and second content repositories, folders of the first and second content repositories, work items of the first and second workflow systems, and queues of the first and second workflow systems, and

wherein creation of the virtual repository does not impact any security of any of the content of the first and second content repositories, folders of the first and second content repositories, work items of the first and second workflow systems, and queues of the first and second workflow systems (see Hobbs col. 4, lines 19-22; wherein the repositories are completely different so nothing is affected).

As to claims 4 and 25, Flores, as modified, discloses:

wherein the API is in a format selected from the group consisting of Java, Component Object Model (COM), Simple Object Protocol (SOAP) Web Services, Representational State Transfer (REST) Web Services, and Web Development Components (see Hobbs col. 14, lines 10-11).

As to claim 5, Flores, as modified, discloses:

a graphical user interface or a web-based interface (see Hobbs figure 8).

As to claims 6 and 26, Flores, as modified, discloses:

wherein said at least one virtual folder is at least one node, respectively, and the first, second, third, fourth~ fifth~ sixth, seventh and eighth links are also nodes, thereby providing a plurality of nodes of the virtual repository wherein the plurality of nodes are arranged in a parent-child hierarchy. (see Hobbs col. 20, lines 17-27; directory).

As to claim 7, Flores, as modified, discloses:

said at least one virtual folder also virtually organizes:

a tenth node being of the type of a link to a third folder populated by saved repository search via a tenth link respectively (see Hobbs col. 20, lines 17-27; link to a directory), an eleventh node being of a type of a link to a fourth folder populated by a workflow system search via an eleventh link (see Hobbs col. 11, lines 40-52), and a twelfth node being of a type of a link to an external resource via a URL (see Hobbs col. 15, lines 46-48).

As to claim 8, Flores, as modified, discloses:

wherein the first, second, third, fourth, fifth, sixth, seventh and eighth links are nodes of the virtual repository that contain meta-data properties in addition to the meta-data maintained for the first work item in the first workflow system, the second work item in

the second workflow system, the first queue in the first workflow system, the second queue in the second workflow system, the first content in the first content repository, the second content in the second content repository, the first folder in the first content repository and the second folder in the second content repository ~~in their respective underlying said content repositories and said workflow systems,~~ wherein the meta-data properties of the nodes describe a use of the first work item, second work item, first queue, second queue, first content, second content, first folder and second folder ~~content organizing structures, work items and work organizing structures~~ of the virtual repository (see Hobbs col. 1, lines 20-42 and see col. 2, lines 48-50 – information, i.e. meta-data, describing the content).

As to claim 9, Flores, as modified, discloses:

wherein the first, second, third, fourth, fifth, sixth, seventh and eighth links are nodes of the virtual repository, wherein the first content repository of the plurality of disparate content repositories has first-content- repository access control rules to the first content and the first folder content ~~organizing~~-structure, wherein the first workflow system of the plurality of disparate workflow systems has first-workflow access control rules to the first work item and the first queue ~~organizing~~-structure, wherein the nodes of the virtual repository comprise supplemental access control rules of the virtual repository, wherein the supplemental access control rules are applied to the nodes within the virtual repository, wherein the supplemental access control rules describe supplemental security constraints to the first content and the first folder

(see Hobbs Col. 28, lines 42-47; wherein access control is provided to the various data warehouses and databases)

~~content organizing structures~~ of the first content repository, wherein the supplemental access control rules describe security constraints to the first work item items and first queue ~~organizing structures~~ of the first workflow system,

wherein the content of the first content repository is accessed in accordance with the supplemental access control rules of the virtual repository and the first-content-repository access control rules of the first content repository (see Hobbs Col. 28, lines 42-47; wherein access control is provided to the various data warehouses and databases),

wherein the first work item of the first workflow system is accessed in accordance with the supplemental access control rules of the virtual repository and the first-workflow access control rules of the first workflow system (see Hobbs Col. 28, lines 42-47; wherein access control is provided to the various data warehouses and databases).

As to claim 11, Flores, as modified, discloses:

further comprising a middleware platform to abstract a particular content repository of the plurality of content repositories of the virtual repository, and another middleware platform to abstract a particular workflow system of the plurality of workflow systems of the virtual repository. (see Hobbs col. 14, lines 59-64).

As to claim 27, Flores, as modified, discloses:

wherein said first, second, third, fourth, fifth, sixth, seventh and eighth and ninth nodes participate ~~participating~~ in said relationships with information, said information for each node of said first, second, third, fourth, fifth, sixth, seventh~ and eighth and ninth nodes comprising at least one off meta-data describing said each node, at least one role played in at least one association of said plurality of associations with another node, zero or more scoped names, a unique identifier of the subject of said each node, and 0 or more node types (see Hobbs col. 2, lines 48-50 – information, i.e. meta-data, describing the content).

As to claim 29, Flores, as modified, discloses:

wherein said each association of said plurality of associations has at least two of said members that are nodes playing a specific named role in said each association (see Hobbs col. 2, line 57 – database content; wherein database contents have links which are entities and entities have specific roles and relationships).

As to claim 30, Flores, as modified, discloses:

wherein members represent the specific role a node plays in an association.
(see Hobbs col. 2, line 57 – database content; wherein database contents have links which are entities and entities have specific roles and relationships).

As to claim 31, Flores, as modified, discloses:

wherein members have a player specifying the node playing the role in the association

(see Hobbs col. 2, line 57 – database content; wherein database contents have links which are entities and entities have specific roles and relationships and wherein relationships comprise members of nodes and their roles).

5. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flores et al. (US Pat. No. 5,734,837), in view of Hobbs (US Pat. No. 6,523,022), and in view of Michaelides (U.S. Pub. No. 2004/0181753).

As to claim 12, Flores and Hobbs do not explicitly disclose:

adaptors to provide access to the first and second content repositories and the first and second workflow systems.

However, Michaelides discloses:

adaptors to provide access to the first and second content repositories and the first and second workflow systems (see paragraph [0004, line 4 – set of adaptors for applications]).

It would have been obvious, at the time of the invention, having teachings of Flores, Hobbs and Michaelides before him/her, to combine the features as disclosed by Flores and Hobbs with the features as disclosed by Michaelides to facilitate integration between applications, systems, and processes (see Michaelides, paragraph [0002], lines 4-5).

As to claim 13, Flores and Hobbs does not explicitly disclose:

further comprising an adaptor toolkit that enables the system to build interfaces to future

developed content repositories and/or workflow systems.

However, Michaelides discloses:

further comprising an adaptor toolkit that enables the system to build interfaces to future developed content repositories and/or workflow systems (see paragraph [0004], lines 10-11).

It would have been obvious, at the time of the invention, having teachings of Flores, Hobbs and Michaelides before him/her, to combine the features as disclosed by Flores and Hobbs with the features as disclosed by Michaelides to facilitate integration between applications, systems, and processes (see Michaelides, paragraph [0002], lines 4-5).

6. Claims 32 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flores et al. (US Pat. No. 5,734,837), in view of Hobbs (US Pat. No. 6,523,022), and in view of Brunner et al. (U.S. Pat. No. 5,550,971).

As to claim 32, Flores and Hobbs do not explicitly disclose:

wherein the associations have 0 or more association types, wherein the association types have logical properties describing the type of the relationship, wherein said logical properties comprise at least one of: an allowed cardinality of the relationship, allowed members of the relationship, required members of the relationship, a transitivity of the relationship, a delete propagation across the relationship, and a save propagation across the relationship.

However, Brunner et al. disclose:

wherein the associations have 0 or more association types, wherein the association types have logical properties describing the type of the relationship, wherein said logical properties comprise at least one of: an allowed cardinality of the relationship, allowed members of the relationship, required members of the relationship, a transitivity of the relationship, a delete propagation across the relationship, and a save propagation across the relationship (see col. 5, lines 66-67 and col. 6, line 1 - 3).

It would have been obvious, at the time of the invention, having teachings of Flores, Hobbs and Brunner et al. before him/her, to combine the features as disclosed by Hobbs with the features as disclosed by Brunner et al. to facilitate the generation of a user interface that is adaptable to various database systems (see Brunner et al., col. 2, lines 46-48).

As to claim 58, Flores and Hobbs do not explicitly disclose:

wherein the associations have association types, wherein the association types have logical properties describing the type of the relationship, wherein said logical properties comprise an allowed cardinality of the relationship, allowed members of the relationship, required members of the relationship, a transitivity of the relationship, a delete propagation across the relationship, and a save propagation across the relationship.

However, Brunner et al. disclose:

wherein the associations have association types, wherein the association types have logical properties describing the type of the relationship, wherein said logical properties

comprise an allowed cardinality of the relationship, allowed members of the relationship, required members of the relationship, a transitivity of the relationship, a delete propagation across the relationship, and a save propagation across the relationship (see col. 5, lines 66-67 and col. 6, line 1 - 3).

It would have been obvious, at the time of the invention, having teachings of Flores, Hobbs and Brunner et al. before him/her, to combine the features as disclosed by Hobbs with the features as disclosed by Brunner et al. to facilitate the generation of a user interface that is adaptable to various database systems (see Brunner et al., col. 2, lines 46-48).

7. Claims 39-44 and 52-57 are rejected under 35 U.S.C. 103(a) as being obvious over Hobbs (US Pat. No. 6,523,022) and in view of Armstrong et al. (U.S. Pat. No. 6, 279, 046).

As to claim 39, Flores, as modified by Hobbs, discloses:

a processor (see Flores col. 7, line 50); and

a memory (see Flores col. 7, line 50) comprising:

a first application program interface (API), executable by the processing unit, to interface with a software application;

a plurality of subscriptions to a plurality of subscribed-to-items, respectively, wherein the first API interfaces to the software application to create the plurality of subscriptions; the

subscribed-to-items comprising a first content of a first content repository, a first folder of the first content repository, a first work item of a

(see Hobbs col. 5, lines 37-39); and

first queue of a first workflow system, a first queue structure of the first workflow system, a second content of a second content repository, a second folder content of the second content repository, a second work item of a second workflow system, a second queue of the second workflow system (see Flores col. 4, lines 24-35);

wherein the first content repository, the second content repository, the first workflow system and the second workflow system are disparate and distributed;

wherein the plurality of subscriptions are requests to track when at least one of an addition, change and delete occurs to any of the subscribed-to-items, respectively, the subscribed-to-items comprising, the first content, the first folder, the first work item, the first queue, the second content, the second folder, the second work item and the second queue; the plurality of subscriptions comprising a first subscription, a second subscription, a third subscription, a fourth subscription, a fifth subscription, a sixth subscription, a seventh subscription, and an eighth subscription; the first subscription to track when at least one of an addition, change and delete occurs to the first content, the second subscription to track when at least one of an addition, change and delete occurs to the first folder, the third subscription to track when at least one of an addition, change and delete occurs to the first work item, the fourth subscription to track when at least one of an addition, change and delete occurs to the first queue, the fifth subscription to track when at least one of an addition, change and delete occurs to the second content,

the sixth subscription to track when at least one of an addition, change and delete occurs to the second folder, the seventh subscription to track when at least one of an addition, change and delete occurs to the second work item, the eighth subscription to track when at least one of an addition, change and delete occurs to the second queue (see col. 1, lines 20-42; col. 4, lines 19-20; col. 21. lines 41-50; col. 8, lines 18-34) and (see col. 7, line 1 and col. 28, lines 13-26).

However, Flores nor Hobbs does not explicitly disclose:

an event path defined per a logical group comprising a timer, a subscription group processor that creates events based on the subscriptions in response to the timer, a content monitor that detects change based on the events, an event filter that filters uninteresting change and interesting change, based on the change detected by the content monitor, and an event handler that receives the interesting change, wherein the software application configures the event path via the module API.

Armstrong et al. discloses:

an event path defined per a logical group comprising a timer, a subscription group processor that creates events based on the subscriptions in response to the timer, a content monitor that detects change based on the events, an event filter that filters uninteresting change and interesting change, based on the change detected by the content monitor, and an event handler that receives the interesting change, wherein the software application configures the event path via the module API. (see col. 8, line 41).

It would have been obvious, at the time of the invention, having teachings of Flores and Hobbs, and Armstrong et al. before him/her, to combine the features as

disclosed by FLores and Hobbs. with the features as disclosed by Armstrong et al. to provide an event-driven communications interface to support communications between multiple logical partitions in a logically portioned computer (see Armstrong et al., col. 2, line 40-42).

As to claim 40, Flores and Hobbs. , do not explicitly disclose:

wherein the timer initiates periodic polling of at least one of the first and second content repositories and the first and second workflow systems to detect a change that needs notification.

However, Armstrong et al. discloses:

wherein the timer initiates periodic polling of at least one of the first and second content repositories and the first and second workflow systems to detect a change that needs notification (see col. 11, lines 61-65).

It would have been obvious, at the time of the invention, having teachings of Flores and Hobbs. and Armstrong et al. before him/her, to combine the features as disclosed by Flores and Hobbs. with the features as disclosed by Armstrong et al. to provide an event-driven communications interface to support communications between multiple logical partitions in a logically portioned computer (see Armstrong et al., col. 2, line 40-42).

As to claim 41, Flores and Hobbs. , do not explicitly disclose:

wherein the plurality of subscriptions are organized into at least one subscription group and the subscription group processor initiates the events on subscriptions of [[a]] the at least one subscription group.

However, Armstrong et al. discloses:

wherein the plurality of subscriptions are organized into at least one subscription group and the subscription group processor initiates the events on subscriptions of [[a]] the at least one subscription group (see col. 11, lines 59-61).

It would have been obvious, at the time of the invention, having teachings of Flores and Hobbs. and Armstrong et al. before him/her, to combine the features as disclosed by Flores and Hobbs. with the features as disclosed by Armstrong et al. to provide an event-driven communications interface to support communications between multiple logical partitions in a logically portioned computer (see Armstrong et al., col. 2, line 40-42).

As to claim 42, Flores and Hobbs. , do not explicitly disclose:

wherein the content monitor comprises a plug-in software module for detect the change in subscribed-to items.

However, Armstrong et al. discloses:

wherein the content monitor comprises a plug-in software module for detect the change in subscribed-to (monitored) items (see col. 8, lines 5-10; wherein changes are tracked for those items that are monitored).

It would have been obvious, at the time of the invention, having teachings of Flores, Hobbs, and Armstrong et al. before him/her, to combine the features as disclosed by Flores and Hobbs, with the features as disclosed by Armstrong et al. to provide an event-driven communications interface to support communications between multiple logical partitions in a logically portioned computer (see Armstrong et al., col. 2, line 40-42).

As to claim 43, Flores and Hobbs, do not explicitly disclose:

wherein the event filter comprises at least one plug-in module for filtering interesting and plug-in modules that filters the interesting and uninteresting change in the subscribed-to-items, based on a meta-data value of at least one of the subscribed-to-items.

However, Armstrong et al. discloses:

wherein the event filter comprises at least one plug-in module for filtering interesting and plug-in modules that filters the interesting and uninteresting change in the subscribed-to-items, based on a meta-data value of at least one of the subscribed-to-items (see col.

11, lines ; wherein the event is processed before it reaches the target object (i.e. filtered by the filtering module based on data about the item).

It would have been obvious, at the time of the invention, having teachings of Flores, Hobbs, and Armstrong et al. before him/her, to combine the features as disclosed by Flores and Hobbs, with the features as disclosed by Armstrong et al. to provide an event-driven communications interface to support communications between

multiple logical partitions in a logically portioned computer (see Armstrong et al., col. 2, line 40-42).

As to claim 44, Flores and Hobbs, do not explicitly disclose:

wherein a subscription context is made available to the content monitor, event filter and event with access selected from at least one of:

access to a live content integration middleware session, access to a live workflow integration middleware session, access to a statistics reporting API, access to an error reporting API, access to a logging API, and access to the active subscription.

However, Armstrong et al. discloses:

wherein a subscription context is made available to the content monitor, event filter and event with access selected from at least one of:

access to a live content integration middleware session, access to a live workflow integration middleware session, access to a statistics reporting API, access to an error reporting API, access to a logging API, and access to the active subscription (see col. 5, lines 65-67 - col. 6, line 1 and col.

7, lines 61-64; wherein an event handler sends an acknowledgement in the form of a subscription).

It would have been obvious, at the time of the invention, having teachings of Flores, Hobbs, and Armstrong et al. before him/her, to combine the features as disclosed by Flores and Hobbs, with the features as disclosed by Armstrong et al. to

provide an event-driven communications interface to support communications between multiple logical partitions in a logically portioned computer (see Armstrong et al., col. 2, line 40-42).

As to claim 52, Flores and Hobbs , do not explicitly disclose:

wherein each subscription of the plurality of subscriptions is stored with at least one of: meta-data describing said each subscription, encrypted user credentials, a representation of a state of a subscribed-to-item of said each subscription, and a membership in a logical subscription group.

However, Armstrong et al. discloses:

wherein each subscription of the plurality of the subscriptions is stored with at least one of: meta-data describing said each subscription, encrypted user credentials, a representation of a state of a subscribed-to-item of said each subscription, and a membership in a logical subscription group (see col.8, lines 1-15).

It would have been obvious, at the time of the invention, having teachings of Flores, Hobbs, and Armstrong et al. before him/her, to combine the features as disclosed by Flores and Hobbs with the features as disclosed by Armstrong et al. to provide an event-driven communications interface to support communications between multiple logical partitions in a logically portioned computer (see Armstrong et al., col. 2, line 40-42).

As to claim 53, Flores ,as modified, discloses:

wherein the API is in a format selected from the group consisting of Java, Component Object Model (COM), Simple Object Protocol (SOAP) Web Services, Representational State Transfer (REST) Web Services, and Web Development Components (see Hobbs col. 14, lines 10-11).

As to claim 54, Flores, as modified, discloses:

a graphical user interface or a web-based interface (see Hobbs figure 8).

As to claim 55, Flores. And Hobbs do not explicitly disclose:

wherein at least two of the subscriptions with a common polling interval are organized into a logical group.

However, Armstrong et al. discloses:

wherein at least two of the subscriptions with a common polling interval (see col. 11, lines 61-65). are organized into a logical group (see col.8, lines 1-15).

It would have been obvious, at the time of the invention, having teachings of Flores, Hobbs. and Armstrong et al. before him/her, to combine the features as disclosed by Hobbs. with the features as disclosed by Armstrong et al. to provide an event-driven communications interface to support communications between multiple logical partitions in a logically portioned computer (see Armstrong et al., col. 2, line 40-42).

As to claim 56, Flores and Hobbs. , do not explicitly disclose:

wherein at least two of the subscriptions with a common event path are organized into a logical group.

However, Armstrong et al. discloses:

wherein at least two of the subscriptions with a common event path (see col. 8, line 41) are organized into a logical group (see col.8, lines 1-15).

It would have been obvious, at the time of the invention, having teachings of Flores, Hobbs, and Armstrong et al. before him/her, to combine the features as disclosed by Hobbs, with the features as disclosed by Armstrong et al. to provide an event-driven communications interface to support communications between multiple logical partitions in a logically portioned computer (see Armstrong et al., col. 2, line 40-42).

As to claim 57, Flores as modified by Hobbs discloses:

providing a module application program interface (API) to interface with a software application (see Hobbs col. 7, line 1 and col. 28, lines 13-26);

wherein the first content repository, the second content repository, the first workflow system and the second workflow system are disparate and distributed (see col. 4, lines 24-35); wherein the subscriptions are requests to track when at least one of an addition, change and delete occurs to any of the subscribed-to-items, respectively, the subscribed- to-items comprising the first content, the first folder, the first work item, the first queue, the second content, the second folder, the second work item and the second queue; the plurality of subscriptions comprising a first subscription, a second

subscription, a third subscription, a fourth subscription, a fifth subscription, a sixth subscription, a seventh subscription, and an eighth subscription; the first subscription to track when at least one of an addition, change and delete occurs to the first content, the second subscription to track when at least one of an addition, change and delete occurs to the first folder, the third subscription to track when at least one of an addition, change and delete occurs to the first work item, the fourth subscription to track when at least one of an addition, change and delete occurs to the first queue, the fifth subscription to track when at least one of an addition, change and delete occurs to the second content, the sixth subscription to track when at least one of an addition, change and delete occurs to the second folder, the seventh subscription to track when at least one of an addition, change and delete occurs to the second work item, the eighth subscription to track when at least one of an addition, change and delete occurs to the second queue (see col. 1, lines 20-42; col. 4, lines 19-20; col. 21, lines 41-50; col. 8, lines 18-34) and (see col. 7, line 1 and col. 28, lines 13-26);

However, Flores and Hobbs does not explicitly disclose:

creating, via the module API, a plurality of subscriptions to a plurality of subscribed-to-items, respectively, the subscribed-to-items comprising a first content of a first content repository, a first content organizing structure of the first content repository, a first work item of a first workflow system, a first work organizing structure of the first workflow system, a second content of a second content repository, a second content organizing structure of the second content repository, a second work item of a second workflow system, a second work organizing structure of the second workflow system;

wherein the subscriptions are requests to track when at least one of an addition, change and delete occurs to any of the subscribed-to-items, respectively ;
configuring, via the module API, an event path defined per a logical group comprising a timer, a subscription group processor that creates events based on the plurality of subscriptions in response to the timer, a content monitor that detects change in the first content first folder, second content, second folder, first work item, first queue~ second work item, and second queue based on the events, an event filter that filters based on the events, an event filter that filters uninteresting change and interesting change based on the change detected by the content monitor; and receiving, by the event handler, the interesting change.

Armstrong discloses:

creating, via the module API, a plurality of subscriptions to a plurality of subscribed-to-items, respectively, the subscribed-to-items comprising a first content of a first content repository, a first content organizing structure of the first content repository, a first work item of a first workflow system, a first work organizing structure of the first workflow system, a second content of a second content repository, a second content organizing structure of the second content repository, a second work item of a second workflow system, a second work organizing structure of the second workflow system (see Hobbs col. 11, lines ; wherein the event is processed before it reaches the target object (i.e. filtered by the filtering module based on data about the item);
wherein the subscriptions are requests to track when at least one of an addition, change and delete occurs to any of the subscribed-to-items, respectively (see Hobbs col. 5, lines

37-39); configuring, via the module API, an event path defined per a logical group comprising a timer, a subscription group processor that creates events based on the plurality of subscriptions in response to the timer, a content monitor that detects change in the first content first folder, second content, second folder, first work item, first queue~second work item, and second queue based on the events (see Hobbs col. 8, line 41), an event filter that filters uninteresting change and interesting change based on the change detected by the content monitor ; and receiving, by the event handler, the interesting change see col. 11, lines ; wherein the event is processed before it reaches the target object (i.e. filtered by the filtering module based on data about the item).

It would have been obvious, at the time of the invention, having teachings of Flores, Hobbs, and Armstrong et al. before him/her, to combine the features as disclosed by Hobbs, with the features as disclosed by Armstrong et al. to provide an event-driven communications interface to support communications between multiple logical partitions in a logically portioned computer (see Armstrong et al., col. 2, line 40-42).

8. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flores et al. (US Pat. No. 5,734,837), in view of Hobbs (US Pat. No. 6,523,022) in view of Armstrong et al. (U.S. Pat. No. 6, 279, 046) in view of Zintel et al. (U.S. PG. Pub. No. 2002/0029256) and further in view of Mobley et al. (U.S. Pat. No. 5,708,963).

As to claim 45, Flores as modified does not explicitly disclose:

further comprising a statistics module for gathering runtime statistics on the events passing through the event path and displaying said statistics.

However, Mobley et al. disclose:

further comprising a statistics module for gathering runtime statistics on the events passing through the event path and displaying said statistics (see col. 11, lines 60-62; wherein the decoder has a statistics module).

It would have been obvious, at the time of the invention, having teachings of Flores, Hobbs, Armstrong et al., Zintel et al. and Mobley et al. before him/her, to combine the features as disclosed by Flores, Hobbs, Armstrong et al. and Zintel et al. with the features as disclosed by Mobley et al. to provide an efficient, reliable return path for returning data from a subscriber location to a service originator in a direct-to-home subscription information delivery service system (see Mobley et al. col. 6, lines 22-25).

Response to Arguments

9. Applicant's arguments filed 12-19-2008 have been fully considered but they are not persuasive.

Applicants argument that "Hobbs does not teach at least one virtual folder virtually organizing a first folder of the first content repository, and a second folder of a second content repository via a plurality of links, a seventh link being to the first folder and the eighth link being to the second folder, wherein the first folder is accessed via

the seventh link and the API, and the second folder is accessed via the eighth link and the API." is acknowledged but is not deemed persuasive.

In col. 4, lines 24-35 of Flores, who is actually cited for these limitations, "a virtual repository comprising at least one virtual folder a ~~plurality of nodes~~, said at least one virtual folder virtually organizing a first work item of a first queue of a first workflow system of the plurality of disparate workflow systems, the first queue of the first workflow system, a second work item of a second workflow system of the plurality of disparate workflow systems, a second queue of the second workflow system" is disclosed. Flores discloses a plurality of workflows linked together. As it is common knowledge that workflow systems have queues, so it is stated in col. 4 line 64 of Flores. The workflow systems are virtual repositories that organize work items. The items are stored in folders (see Flores col. 29, lines 16-18).

Applicant continues to argue that "Neither Flores nor Hobbs teaches a link to a queue. Neither Flores et al nor Hobbs teaches virtually organizing a queue of a workflow system". This argument is acknowledged but is not deemed persuasive.

As stated above, Flores discloses workflow systems that are linked together and since the systems contain queues, as cited in Flores, these queues are also linked together. As for virtually organizing the queue, applicant doesn't recite how this queue is "virtually organized". Nevertheless, Flores discloses workflow systems which "virtually organize" workflow items and queues.

Applicants next argument recites, "Hobbs does not teach a seventh node representing a first folder of the first content repository, and an eighth node representing a second folder of the second content repository. Hobbs does not teach that the seventh and eighth nodes are members of at least one association". This argument is acknowledged but is not deemed persuasive.

Again, as cited above in Flores, a plurality of workflow systems are linked together. Hobbs, on the other hand, is cited for disclosing several disparate databases that are linked together, see col. 2, lines 48-50. The database contents have links which are entities and entities have specific roles and relationships.

Applicant also argues that "Neither Flores et al nor Hobbs teaches a third node representing a first queue of the first workflow system, and a fourth node representing a second queue of the second workflow system. Neither Flores et al nor Hobbs teaches that the third node and the fourth node are members of at least one association. Neither Flores et al nor Hobbs teaches locators to the first and second queues, and to the first and second folders." This argument is acknowledged but is not deemed persuasive.

Flores teaches links between queues as cited above. Hobbs, however, teaches locators which are urls, see col. 15, lines 46-48.

Applicant continues to argue, "Michaelides does not teach a virtual repository comprising at least one virtual folder organizing queues and folders. There is no teaching of a link to a folder in Michaelides. Furthermore, Michaelides does not teach

first and second workflow systems. In addition, Michaelides does not teach a link to a work item and link to a queue of a workflow system.

Michaelides is not cited for these limitations. Flores combined with Hobbs is cited. Please review the above arguments as well as claims 1-13.

Applicants next argument states that, "Although Brunner uses the term "ASSOCIATION type", Brunner does not teach each and every recitation of Claim 58 of: wherein the associations have association types, wherein the association types have logical properties describing the type of the relationship, wherein said logical properties comprise an allowed cardinality of the relationship, allowed members of the relationship, required members of the relationship, a transitivity of the relationship, a delete propagation across the relationship, and a save propagation across the relationship. In particular, Brunner does not teach delete propagation or a save propagation across the relationship.". This argument is acknowledged but is not deemed persuasive.

In claim 58, Brunner disclose "wherein the associations have association types, wherein the association types have logical properties describing the type of the relationship, wherein said logical properties comprise an allowed cardinality of the relationship, allowed members of the relationship, required members of the relationship, a transitivity of the relationship, a delete propagation across the relationship, and a save propagation across the relationship" (see col. 5, lines 66-67 and col. 6, line 1 - 3) wherein Instances of the ASSOCIATION type are objects that define relationships

between an instance of an ENTITY-type and another instance of an ENTITY-type (or the same instance of an ENTITY-type in the case of a recursive relationship).

Applicant continues to argue, "Neither Flores et al nor Hobbs teaches that the plurality of subscriptions are requests to track when at least one of an addition, change and delete occurs to any of the subscribed-to-items, respectively, the subscribed-to-items comprising the first content, the first folder, the first work item, the first queue, the second content, the second folder, the second work item and the second Queue". This argument is acknowledged but is not deemed persuasive.

Hobbs is cited as disclosing these limitations. In col. 5, lines 36-39, users request to receive emails of updates or "changes" that have been made to the contents of their chosen subscriptions.

Lastly, applicant argues that "Armstrong does not teach: an event path defined per a logical group comprising a timer, a subscription group processor that creates events based on the plurality of subscriptions in response to the timer, a content monitor that detects change in the first content, first folder, second content, second folder, first work item, first queue, second work item, and second queue based on the events, an event filter that filters uninteresting change and interesting change based on the change detected by the content monitor, and an event handler that receives the interesting change, wherein the event handler logs the interesting change.". This argument is acknowledged but is not deemed persuasive.

In col. 8, line 41 and cols. 11-12, lines 54-3 of Armstrong, “: an event path defined per a logical group comprising a timer, a subscription group processor that creates events based on the plurality of subscriptions in response to the timer, a content monitor that detects change in the first content, first folder, second content, second folder, first work item, first queue, second work item, and second queue based on the events, an event filter that filters uninteresting change and interesting change based on the change detected by the content monitor, and an event handler that receives the interesting change, wherein the event handler logs the interesting change” is disclosed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johnese Johnson whose telephone number is 571-270-1097. The examiner can normally be reached on 4/5/9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. J./
Examiner, Art Unit 2166

April 7, 2009
JJ

/Srirama Channavajjala/
Primary Examiner, Art Unit 2166